

[0073] FIGS. 13a-13b show an interactive program banner in accordance with a fifth embodiment of the invention. Like the conventional program banner of FIG. 2, the program banner 100 of FIG. 13a includes a program window 102 that displays information concerning the content, time and duration of the current program, which is typically obtained from program metadata for the current program. However, the banner 100 also includes a segment window 104 that displays content information about a segment of the program, which is obtained from segment metadata for the segment on which the cursor is located. When the banner is initially displayed, the cursor is located on the field of the segment that is currently being presented.

[0074] The banner 100 also includes a column 106 of segment fields 108 that provide descriptive and timing information for segments of the program. When the banner is initially displayed a cursor is located in the segment field column 106 on the field of the current segment, and a current segment marker independent of the cursor is also preferably displayed. In the segment field column 106 of FIG. 13a the current segment marker is provided as a distinct frame that surrounds the field of the current segment, while the cursor is indicated by highlighting the segment field on which the cursor is located. As shown in FIG. 13b, the viewer may navigate the cursor up and down within the segment field column 106, causing the segment window 104 to display segment information for the segment on which the cursor is located.

[0075] FIGS. 14a and 14b show an interactive program banner in accordance with a sixth embodiment of the invention. The program banner of FIG. 14a and 14b differs from the program banner of FIGS. 13a and 13b in that the segment fields 108 of the segment field column 106 contain detailed descriptive information that was displayed in the segment window of the previous embodiment. As shown in FIG. 14b, the viewer may scroll through the column of segment fields, with the current segment remaining highlighted. In the illustrated embodiment, the segment field column 106 contains a fixed number of segment fields 108, and the fields are scrolled in response to cursor movement commands. This embodiment may be preferred in order to reduce the amount of space occupied by the program banner while allowing the viewer to browse through information about each program segment using a display that provides information about several segments simultaneously.

[0076] FIGS. 15a and 15b show an interactive program banner in accordance with a seventh embodiment of the invention. The program banner of FIGS. 15a and 15b uses an array of segment fields 110 to represent the segments of a program. The sizes of the respective segment fields are preferably proportional to the distances between their respective start times. The banner includes program description information 112 which is typically obtained from program metadata, and segment description information 114 which is obtained from segment metadata. When the program banner is initially displayed, the cursor is located in the field of the segment currently being presented, and above the cursor are provided the start time of the segment on which the cursor is located and the start time of the next segment. As shown in FIG. 15b, the cursor may be moved among the various fields of the segment field array 110, causing the segment information 114 to be updated to provide a descrip-

tion of the segment on which the cursor is located. This embodiment may be preferred for its reduced size.

[0077] FIGS. 16a and 16b show an interactive program banner in accordance with an eighth embodiment of the invention. The banner of this embodiment may also be referred to as a progress bar, and may be displayed in response to a banner display command or may be displayed independently in response to a different command. The banner or progress bar of FIGS. 16a and 16b includes an array of segment fields 110 that represent the segments of a program, with the sizes of the respective segment fields being proportional to the distances between their respective start times. The beginning and ending times of the program are indicated at the ends of the progress bar. The cursor is located on the field of the currently displayed segment and the beginning times of the present segment and the next segment are indicated above the cursor. Beneath the progress bar, descriptive information 114 about the current segment is provided. This data is obtained from the segment metadata. As shown in FIG. 16b, the cursor may be moved to the various fields of the segment field array 110, causing the segment information 114 to be updated to provide a description of the segment on which the cursor is located.

[0078] While the interactive program banners of FIGS. 13a-16b are currently preferred, it will be apparent that a variety of alterations may be made while retaining the primary features of these embodiments. For example, while some of these embodiments display program and segment information in distinct "windows," this manner of display is not critical, rather, it is important only to provide descriptive and timing information for individual segments in some portion of the banner. Further, while some of these embodiments display a detailed description for a single segment in response to movement of a cursor onto a field representing that segment, in other embodiments detailed information such as timing information or descriptive information may be provided for multiple segments or all segments, for example, as a simple static or navigable list of segment descriptive and timing information. In addition, further embodiments may be implemented in which segment information is not automatically displayed in the banner. For example, rather than automatically showing navigable segment fields and segment descriptions in the banner, the banner may simply provide a visible indication when segment information is available for the program. Subsequently, in response to a user command, segment information or segment fields may be displayed. Such information may be displayed within the banner, or may be displayed in a separate window that is presented in response to the user command. Further, that segment information may be navigable or passive, and may be formatted as segment fields or in another format, for example, as a simple list of segment descriptions and times. Additional graphical information may also be displayed in the banner, such as icons or symbols indicating the general subject matter of programs and segments. Such icons and symbols may be generated based on categories, keywords or other descriptive information in the program and segment metadata. Further, the banner may simply be comprised of segment descriptive or timing information that is displayed in response to a display command.

[0079] While the program and segment information displayed in the foregoing embodiments generally includes